TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

2SC4944

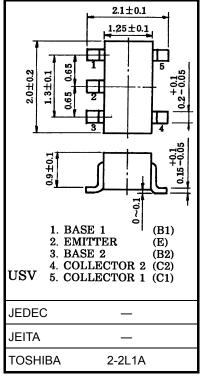
Audio Frequency General Purpose Amplefier Applications

Unit: mm

- Small package (dual type)
- High voltage and high current: $V_{CEO} = 50 \text{ V}$, $I_{C} = 150 \text{ mA}$ (max)
- High h_{FE}: $h_{FE} = 120 \sim 400$
- Excellent hFE linearity: hFE (IC = 0.1 mA)/hFE (IC = 2 mA) = 0.95 (typ.)
- Complementary to 2SA1873

Absolute Maximum Ratings (Ta = 25°C) (Q1, Q2 common)

Characteristics	Symbol	Rating	Unit	
Collector-base voltage	V_{CBO}	60	V	
Collector-emitter voltage	V _{CEO}	50	V	
Emitter-base voltage	V _{EBO}	5	V	
Collector current	IC	150	mA	
Base current	ΙΒ	30	mA	
Collector power dissipation	P _C (Note 1)	200	mW	
Junction temperature	Tj	125	°C	
Storage temperature range	T _{stg}	−55~125	°C	



Weight: 6.2 mg (typ.)

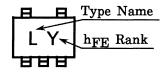
Note: Using continuously under heavy loads (e.g. the application of

high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

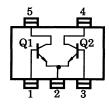
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Note 1: Total rating

Marking



Equivalent Circuit (top view)



Electrical Characteristics (Ta = 25°C) (Q1, Q2 common)

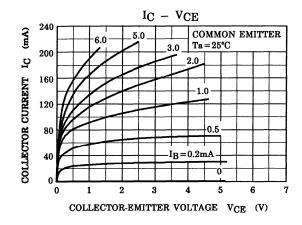
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 60 V, I _E = 0	_	_	0.1	μΑ
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	_	_	0.1	μА
DC current gain	h _{FE} (Note 2)	$V_{CE} = 6 \text{ V}, I_C = 2 \text{ mA}$	120	_	400	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = 100 mA, I _B = 10 mA	_	0.1	0.25	V
Transition frequency	f _T	V _{CE} = 10 V, I _C = 1 mA	80	_	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	_	2	3.5	pF

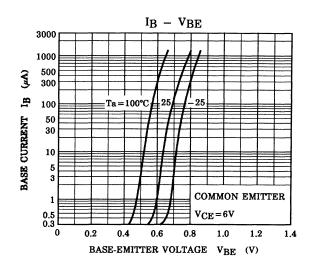
Note 2: hFE classification

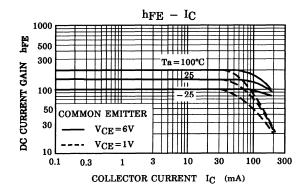
Y (Y): 120~240, GR (G): 200~400

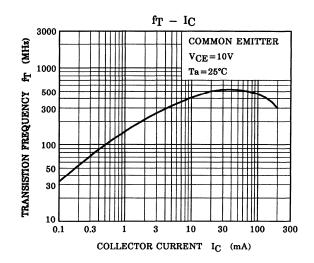
() Marking symbol

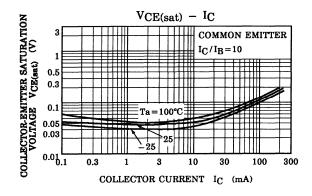
(Q1, Q2, common)

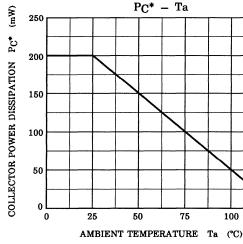


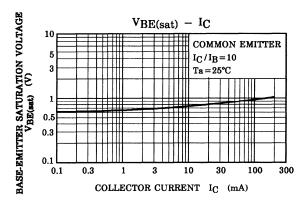












*: Total rating

125

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